

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
3 March 2005 (03.03.2005)

PCT

(10) International Publication Number
WO 2005/019615 A1

(51) International Patent Classification⁷: F01N 3/10, B01D
53/34, B01J 23/63, 21/06

(21) International Application Number:
PCT/JP2004/011429

(22) International Filing Date: 3 August 2004 (03.08.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
2003-300410 25 August 2003 (25.08.2003) JP

(71) Applicant (for all designated States except US): TOY-
OTA JIDOSHA KABUSHIKI KAISHA [JP/JP]; 1, Toy-
ota-cho, Toyota-shi, Aichi, 4718571 (JP).

(72) Inventor; and

(75) Inventor/Applicant (for US only): SUZUKI, Hiromasa
[JP/JP]; c/o TOYOTA JIDOSHA KABUSHIKI KAISHA,
1, Toyota-cho, Toyota-shi, Aichi, 4718571 (JP).

(74) Agent: OHKAWA, Hiroshi; 2-5, Meieki 3-chome Naka-
mura-ku, Nagoya-shi, Aichi, 4500002 (JP).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG,
KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG,
MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH,
PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN,
TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,
FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,
SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: CATALYST FOR PURIFYING EXHAUST GASES AND METHOD OF EVALUATING LOW-TEMPERATURE PU-
RIFYING ABILITY OF THE SAME

(57) Abstract: A catalyst for purifying exhaust gases comprises a support comprising at least an oxide comprising cerium and a
catalytic ingredient loaded on the support, and exhibits a value of an oxygen sorbing amount with respect to a heat capacity, an
oxygen sorbing amount/heat capacity value falling in a range of from 4×10^{-3} to 8×10^{-3} ($\text{g} \cdot \text{J}^{-1} \cdot \text{K}$). When the oxygen sorbing
amount/heat capacity value is in the range, the catalyst is excellent in terms of the low-temperature purifying ability.

WO 2005/019615 A1